UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,593	09/30/2003	Daivid J. Morgan	14012	9939

26230 7590 03/08/2006

FISH & RICHARDSON P.C.
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022

EXAMINER	
TSUI, WILSON W	
ART UNIT	**PAPER NUMBER**
2178	

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/675,593	MORGAN ET AL.	
	Examiner	Art Unit	
	Wilson Tsui	2178	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-46* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/29/2004*
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to application filed on September 30, 2003, and IDS filed on March 29, 2004.

2. Claims 1-46 are pending. Claims 1, 26, 31, and 42 are independent claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 26, 27, 29, 30, 42, 43, 44, and 45 are rejected under 35 U.S.C. 102(b) as being anticipated by Logan et al (US Patent Number: 5,781, 909, issued: Jul 4, 1998, filed: Feb 13, 1996).

With regards to claim 26, Logan et al teaches a method comprising:

- *Receiving a rotation set comprising a list identifying pages to be displayed*: Each client receives and stores a control file, which comprises a transition list. The file is cyclically scanned for display/page entries and thus, represents a rotation set (Logan et al, column 2, lines 16-18).
- *Determining if each page identified in the rotation set is stored in a cache associated with the display device* (Logan et al, column 6, lines 6-36: whereas, in a rotation set, an access mechanism is used to translate URLs into local disk addresses (cache), or to reference data that is not stored in cache on a remote server).

- *Retrieving, from the cache, pages that are stored in the cache* (Logan et al, column 5, lines 40-47: whereas, pages that are stored in cache are retrieved from cache)
- *Sending at least one request for pages that are not stored in the cache to a remote server* (Logan et al, column 6, line 36: whereas, a remote URL is referenced to access a page that is not stored in cache).
- *Receiving the requested pages in response to the at least one request* (Logan et al, column 6, lines 55-56: whereas, incoming HTML pages are received in response to the request and is processed by the access control mechanism)
- *Storing the received pages in the cache*: Received pages are then used to rewrite/update files stored in cache (Logan et al, column 10, lines 15-18: whereas, "locally stored HTML documents may be stored in rewritten form").
- *Displaying each page, wherein the pages are retrieved from the cache and displayed in a repeating sequence until a new rotation set is received*: The pages are displayed in repeating sequence by cycling through the transition list (Logan et al, column 9, lines 48-56), until the list/set is received/updated through a server push mechanism (Logan et al, column 10, lines 1-3).

With regards to claim 27, which depends on claim 26, Logan et al teaches a method wherein: *The rotation set further indicates a time period, corresponding to each identified page, for displaying the identified page, and each page is displayed for the time period corresponding to the page* (Logan et al, column 9, lines 24-33: whereas,

there is a transition control list that contains a set of URLs. The amount of time / duration of an identified URL for display is based on the Showtime field).

With regards to claim 29, which depends on claim 26, Logan et al teaches a method wherein, *the at least one request is sent using hypertext transfer protocol (HTTP)* (Logan et al, column 6, line 35-36: whereas, information is requested from a remote serving using HTTP).

With regards to claim 30, which depends on claim 26, Logan et al teaches a method wherein, *displaying the page comprises displaying the page using a web browser* (Logan et al, column 6, lines 17-20: whereas, the page is sent to a web browser).

With regards to claim 42, Logan et al teaches an article comprising a machine-readable medium storing instructions for causing one or more processors to perform the operations comprising:

- *Receiving, a list of pages to be displayed*: Each client receives and stores a control file, which comprises a transition list. The file is cyclically scanned for display/page entries and thus, represents a rotation set (Logan et al, column 2, lines 16-18).
- *Retrieving, from a local cache, pages in the list that are stored in the local cache:* (Logan et al, column 5, lines 40-47: whereas, pages that are stored in cache are retrieved from cache)
- *Requesting, from a remote server, pages in the list that are not stored in the local cache* (Logan et al, column 6, line 36: whereas, remote URLs can be referenced to access pages that are not stored in cache).

- *Receiving pages from the remote server* (Logan et al, column 6, lines 55-56: whereas, incoming HTML pages are received in response to the request and is processed by the access control mechanism)
- *Storing the received pages in the local cache*: Received pages are then used to rewrite/update files stored in cache (Logan et al, column 10, lines 15-18: whereas, "locally stored HTML documents may be stored in rewritten form").
- *Displaying the pages in the list in a repeating sequence, using the pages stored in the local cache, until a new list of pages is received*: The pages are displayed in repeating sequence by cycling through the transition list (Logan et al, column 9, lines 48-56), until the list/set is received/updated through a server push mechanism (Logan et al, column 10, lines 1-3).

With regards to claim 43, which depends on claim 42, Logan et al teaches an article wherein *the list of pages comprises a uniform resource locator (URL) associated with each page* (Logan et al, See Figure 13, reference number 600) *and a specific page is requested from the remote server using a hypertext transfer protocol (HTTP) request containing the URL associated with the specific page* (Logan et al, column 6, line 35-36: whereas, a HTTP request is made for a specific page).

With regards to claim 44, which depends on claim 42, Logan et al teaches an article wherein the machine readable medium stores instructions for causing one or more processors to perform further operations *comprising displaying each page in the list of pages for a predetermined amount of time in each repetition of the repeating sequence* (Logan et al, column 9, lines 24-33: whereas, there is a transition control list that

contains a set of URLs. The amount of time / duration of an identified URL for display is based on the Showtime field).

With regards to claim 45, which depends on claim 42, Logan et al teaches an article wherein the machine readable medium stores instructions for causing one or more processors to perform further operations comprising:

- *Receiving a new list of pages* (Logan et al, column 10, lines 1-14: whereas, a new list of pages is received through a server push mechanism)
- *Identifying pages in the new list that differ from the pages stored in the local cache*: Pages in the new list that differ from pages stored in the local cache are identified through a validation routine (Logan et al, column 19, lines 52-58)
- *Requesting the identified pages from the remote server* (Logan et al, column 19, lines 52-58: whereas, the identified pages are "retrieved and stored locally" from a remote server)

4. Claims 31, 32, and 39 is rejected under 35 U.S.C. 102(b) as being anticipated by Lefeber et al (US Application: 2002/0046299, published: Apr. 18, 2002, filed: Dec. 6, 2000).

With regards to claim 31, Lefeber et al teaches a system for displaying information on a set of displays comprising:

- *A database for storing data to be displayed* (Lefeber et al, Figure 4, reference number 409: whereas, a web server stores the data to be displayed).
- *At least one server adapted to respond to a change in the stored data to be displayed by identifying at least one client adapted to display the stored data and*

notifying the at least one client of the change in the stored data (Lefeber et al, paragraph 63: whereas, a signaling server responds to the change in stored data to be displayed by contacting the client using client location and device type information)

- *Receive a request for a page containing the changed data*: (Lefeber et al, paragraph 51: whereas the server uses guaranteed signaling by waiting to receive a request for the changed data).
- *Generate the requested page* (Lefeber et al, paragraph 66: whereas, a web page is crafted by the network).
- *Send the page to a client that displays the page in response to the received request* (Lefeber et al, paragraph 69: whereas, the crafted page is sent to the client device).

With regards to claim 32, which is dependent on claim 31, Lefeber et al teaches a system wherein *the database notifies the server when the data to be displayed has changed* (Lefeber et al, paragraph 062: whereas, a web server (figure 4, reference 409) that stores the data to be displayed, notifies the signaling server (figure 4, reference 402) that data to be displayed has changed).

With regards to claim 39, which is dependent on claim 31, Lefeber teaches a system wherein *the server further comprises a page maker module adapted to generate the requested pages using the changed data in the database and using formatting data defining the content and layout of the pages* (Lefeber et al, paragraph 0066: whereas, a web server (figure 4, reference 409) generates a web page using changed data (in this

case a bid price has changed). Furthermore, web pages inherently have some form of HTML, which comprises markup for defining content and layout of a page).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 16, 17, 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lefeber et al (US Application: 2002/0046299, published: Apr. 18, 2002, filed: Dec. 6, 2000) in further view of Smith et al (US Application: 2002/0016839 A1, published: Feb. 7, 2002, filed: May 31, 2001).

With regards to Claim 1, Lefeber et al teaches a method comprising:

- Receiving a notification concerning *a change in data* that is tagged as interesting by a client or set of clients (Lefeber et al, paragraphs 32 and 33: whereas, the data tagged as interesting are represented as a set of rules, and the server will send signals to the user when a change of data has occurred, such as "when a stock reaches a particular price").
- *Notifying the set of clients of a change to the displayed data* (Lefeber et al, paragraph 32 and 33: whereas, a client device or set of client devices (paragraph 48), are sent a signal about the change in data).

- *Receiving a request for a page containing the changed data in response to the notification* (Lefeber et al, paragraph 51: whereas the server uses guaranteed signaling by waiting to receive a request for the changed data).
- *Generating a page containing the changed data* (Lefeber et al, paragraph 66: whereas, a web page is crafted by the network).
- *Sending the page containing the changed data to the set of clients* (Lefeber et al, paragraph 69: whereas, the crafted page is sent to the client device).

However, Lefeber et al does not expressly teach *identifying* a change in data that is *displayed by a set of clients*.

Smith et al teaches a method comprising:

- *Identifying* a change in data *that is displayed by a set of clients* (paragraph 14: The client manager detects changes in data, and locates the set of client devices displaying the changed data. Once located, they are displayed on the client device(s) (Smith et al, paragraph 0082)).

Furthermore, Lefeber et al and Smith et al are analogous art, since they are from the same problem solving area: distributed networking, and server push upon data change.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Lefeber et al's event notification system to identify changed data that is displayed by a set of clients, as taught by Smith et al, instead of receiving notification of changed data. The combination of Lefeber et al and Smith et al would have allowed Lefeber et al's system to have "forwarded state change information for transmission to the client" devices (Smith et al, paragraph 0014).

With regards to claim 16, Lefeber et al teaches a method *identifying a change in the displayed data comprises receiving an indication of the change in* tagged data (Lefeber et al, paragraphs 32 and 33: whereas, the data tagged as interesting are represented as a set of rules, and the server will send signals to the user when a change of data has occurred, such as "when a stock reaches a particular price"). However, Lefeber et al does not teach the *data being displayed*.

Smith et al teaches *displayed data*, in claim 1, and is rejected under the same rationale.

It would have been obvious to have modified Lefeber et al's change notification system to further include receiving data that is being displayed by clients as taught by Smith et al. The combination of Lefeber et al and Smith et al would have allowed Lefeber et al's system to have acquired the latest status of displayed data, so clients could have been notified to display the latest data.

With regards to claim 17, which depends on claim 1, Lefeber et al teaches a method comprising *storing the page containing the changed data for access by a plurality of different displays*: A web server stores a page containing the changed data, such as a change in bid (Lefeber et al, paragraph 0066), so that the page is accessible by a plurality of different displays (Lefeber et al, paragraph 48: whereas, PDA, cell phone, or computer displays are used).

With regards to claim 24, which depends on claim 1, Lefeber et al teaches a method wherein, *the request complies with the hypertext transfer protocol* (Lefeber et al,

paragraph 0038: whereas, communication between client and server is made possible using network protocols that include HTTP).

With regards to claim 25, which depends on claim 1, Lefeber et al teaches a method comprising *displaying the page that contains the changed data in a web browser* (Lefeber et al, paragraph 0054: whereas, a web browser is launched and the client is redirected the page that contains the changed data).

6. Claims 2 - 11, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lefeber et al (US Application: 2002/0046299, published: Apr. 18, 2002, filed: Dec. 6, 2000) and Smith et al (US Application: 2002/0016839 A1, published: Feb. 7, 2002, filed: May 31, 2001) in further view of Logan et al (US Patent Number: 5,781, 909, issued: Jul 4, 1998, filed: Feb 13, 1996).

With regards to claim 2, which is dependent on claim 1, Lefeber et al teaches a method for redirecting a user to a web page when an alert has occurred (such as a change of data) in paragraph 0055. However, Lefeber et al does not teach *identifying the page that contains the changed data, identifying at least one rotation set that identifies the page containing the changed data, and identifying at least one client that displays the at least one identified rotation set.*

Logan et al teaches:

- *Identifying the page that contains the changed data*: Logan et al's system tests for changed data and then when "such testing reveals that a locally stored file should be updated" (Logan et al, column 20, lines 6-7), the locally stored file

(which can be a hypertext document/web page (Logan et al, column 4, lines 5-8)), is updated.

- *Identifying at least one rotation set that identifies the page containing the changed data*: Each client receives and stores a control file, which is cyclically scanned for display/page entries and thus, represents a rotation set (Logan et al, column 2, lines 16-18). In addition, the rotation set used identifies the page containing changed data since each entry in the control file stores "a Chck field storing a time stamp indicated when the entry was last validated, a Mod field (for) storing a time stamp indicating when the corresponding local file was stored or last updated" (Logan et al, column 19, lines 7-10).
- *Identifying the at least one client that displays the at least one identified rotation set*: (Logan et al, column 20, lines 6-9: Since "the supervisory computer may retrieve the modified file from the remote server and then transfer that file to each satellite display unit", where the satellite display unit is the client, it is inherently taught that for the transfer to be possible, the client must have been identified).

Furthermore, Lefeber et al, Smith et al, and Logan et al are from the same problem solving area: Change detection and distribution of data.

It would have been obvious to one of the ordinary skill in the art to have modified Lefeber et al's method for notification system to further include the ability to identify the page that contains changed data, and identify a rotation set to display a set of web pages for a particular client, as taught by Logan et al. The combination of Lefeber et al, Smith et al, and Logan et al, would have allowed Lefeber et al's system to have

"provided content ... and ... monitored the operation of the display units over telecommunication pathways" (Logan et al, column 1, lines 45-48).

With regards to claim 3, which is dependent on claim 2, Lefeber et al does not expressly teach a method *wherein the rotation set specifies a uniform resource locator for at least one page to be displayed by the client to which the rotation set is assigned.*

However, Logan et al teaches *the rotation set specifies a uniform resource locator for at least one page to be displayed by the client to which the rotation set is assigned*: Each client contains a control file, for which is cyclically scanned for display/page entries and thus, represents a rotation set (Logan et al, column 2, lines 16-18). Content is displayed and retrieved by first using the display control mechanism to parse through the control file/lookup table, for which the control file/lookup table contains a URL field (Logan et al, column 19, lines 1-7).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Lefeber et al's rule based notification system to further include a rotation set (which maps a set of pages to users and contains URLs) as taught by Logan et al. The combination of Lefeber et al, Smith et al, and Logan et al, would have allowed the client's of Lefeber et al's system to have accessed a set of content/pages through the use of URLs.

With regards to claim 4, which is dependent on claim 2, Lefeber et al does not teach *a method wherein the rotation set specifies an amount of time for which the at least one page is to be displayed by the client to which the rotation set is assigned.*

Logan et al teaches:

- *The rotation set*, in claim 2, and is rejected under the same rationale.
- The rotation set s*pecifies an amount of time for which the at least one page is to be displayed by the client to which the* rotation set *is assigned* (Logan et al, column 9, lines 24-33: whereas, there is a transition control list that contains a set of URLs. The amount of time / duration of an identified URL for display is based on the Showtime field).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Lefeber et al's notification system to further include the ability to implement a rotation set for client display such that the one or more pages in the rotation set is displayed for a finite period of time. The combination of Lefeber et al, Smith et al, and Logan et al, would have allowed the clients of Lefeber et al's system to have implemented the viewing effectiveness/impact for a page in a rotation set.

With regards to claim 5, which is dependent on claim 2, Lefeber et al teaches a method wherein *notifying a set of clients of the change to the displayed data*, in claim 1, and is rejected under the same rationale. However, Lefeber et al does not teach *sending at least one rotation set to the set of clients, with the pages identified by the at least one rotation set reflecting the change in the displayed data.*

Logan et al teaches

- *Sending at least one rotation set to the set of clients*, in claim 2, and is rejected under the same rationale.
- *The pages identified by the at least one rotation set reflecting the change in the displayed data:* The control file/rotation set is transferred to each client

unit(Logan et al, Abstract) and including pages that have been identified by the rotation set. The page(s) containing the changed information have been identified in a rotation set by checking if there is difference in time between the Chk field and the Mod field (Logan et al, column 19, lines 52-58: whereas, the updated file(s) is/are modified and identified if the Mod and Chk fields indicate the same time, and thus reflect that the page(s) have changed in the displayed data).

It would have been obvious to one of the ordinary skill in the art to have modified Lefeber et al's method for notifying display clients by sending a rotation set as taught by Logan et al. The combination of Lefeber et al, Smith et al, and Logan et al would have allowed Lefeber et al's system to have notified clients about a particular page or set of pages that had changed.

With regards to claim 6, which is dependent on claim 5, Lefeber et al does not teach a method wherein *the at least one rotation set is sent to the set of clients in response to identifying the change in the displayed data.*

However, Smith et al teaches *sending to a set of clients in response to identifying a change in displayed,* a data object: (Smith et al, paragraphs 0014 and 0015: whereas, clients displaying the changed data, retrieve the updated data objects from the client session manager).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Lefeber et al's notification system to identify a change in data, and send the updates to the clients via data objects as taught by Smith et al. The combination of Lefeber et al, Smith et al would have allowed Lefeber et al's notification

system to have "forwarded the state change information for transmission to the client" (Smith et al, paragraph 0014).

However, Lefeber et al and Smith et al does not teach *at least one rotation set.*

Logan et al teaches *at least one rotation set* in claim 2, and is rejected under the same rationale.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Lefeber et al and Smith et al's system of sending data object(s) upon data change, to instead send a rotation set taught by Logan et al. The combination of Lefeber et al, Smith et al and Logan et al, would have allowed Lefeber et al's system to have been able to have sent a new set of pages for display on client devices, without the clients having to unnecessarily poll for updated data.

With regards to claim 7, which is dependent on claim 5, Lefeber et al teaches *hypertext transfer protocol being used* as a method of data communication (Lefeber et al, paragraph 0038). However, Lefeber et al does not expressly teach using HTTP to send a *rotation set.*

Logan et al teaches a *rotation set*, in claim 2, and is rejected under the same rationale.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have used HTTP that supported in Logan et al's notification system for sending a rotation set as well. The combination of Lefeber et al, Smith et al, and Logan et al would have allowed Lefeber et al's system to have updated a set of display data on clients using a well known communications standard (HTTP) for universal support.

With regards to claim 8, which is dependent on claim 5, Lefeber et al teaches *sending, to the set of clients, instructions for each client to request pages that contain changed data in response to receiving an* alert signal (Lefeber et al, paragraph 0054: whereas, the instructions are sent to a client device such that a web browser can be automatically launched to go to a specific web page that references URLs related to an event (such as change in data)). However, Lefeber et al does not teach a *rotation set.*

Logan et al teaches a *rotation set,* in claim 2, and is rejected under the same rationale.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Lefeber et al's notification system to send instructions for clients to request pages that contain changed data in response to the rotation set taught by Logan et al, instead of an alert signal. The combination of Lefeber et al, Smith et al, and Logan et al, would have allowed Lefeber et al's system to optimize the bandwidth used by the client devices as this would allow only changed pages to have been downloaded by the clients, instead of the entire set.

With regards to claim 9, which is dependent on claim 5, Lefeber et al, Smith et al, and Logan et al teaches a method comprising: *sending, to the set of clients, instructions for each client to display the pages identified by a received rotation set*, in claim 8, and is rejected under the same rationale. Also, Logan et al teaches sending to the set of clients, instructions for each client to display the pages identified by a received rotation set *at least until the client receives the new rotation set*: "A server-push mechanism may be used to insert a sequence of one or more leading pages prior to the trailing page"

(Logan et al, column 10, lines 1-8: whereas, in the control file, a selection of pages are inserted into a display queue, and thus, instructs the display unit to display the pages as identified in the rotation set).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Lefeber et al's instructions such that the client will specifically display identified pages by modifying a display queue as taught by Logan. The combination of Lefeber et al, Smith et al, and Logan et al would have allowed Lefeber et al's system to have "provided additional information which is used to alter the presentation to the user" (Logan et al, Abstract).

With regards to claim 10, which is dependent on claim 9, Lefeber et al teaches a method for *sending instructions* to clients, in claim 8, and is rejected under the same rationale. However, Lefeber et al does not teach wherein the instructions *comprise portable, platform independent code*.

Smith et al teaches an information distribution system that is implemented with *portable, platform independent code* (Smith et al, paragraph 0031: whereas, JAVA is used to implement one or more Java Virtual Machines).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Lefeber et al's instructions to JAVA as taught by Smith et al. The combination of Lefeber et al, Smith et al, and Logan et al would have allowed Lefeber et al's system to have established communication with clients, regardless of the type of platform each client is running, thus reducing overhead cost for platform specific development.

With regards to claim 11, which is dependent on claim 9, Lefeber et al teaches a method comprising:

- *Hypertext transfer protocol is used to send*, in claim 7, and is rejected under the same rationale.
- *Sending to a set of clients*, in claim 1, and is rejected under the same rationale.

However, Lefeber et al does not teach sending *instructions for each client to display the pages identified by the received rotation set*.

Logan teaches a method for sending to the set of clients, *the instructions for each client to display the pages identified by the received rotation set*, in claim 9, and is rejected under the same rationale.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Lefeber et al's method for data communication using hypertext transfer protocol, to further include sending instructions for each client to modify its display queue to display pages identified by rotation set as taught by Logan et al. The combination of Lefeber et al, Smith et al, and Logan et al, would have allowed Lefeber et al's system to have updated a set of display data on clients using a well known communications standard (HTTP) for universal support.

With regards to claim 19, Lefeber et al teaches a method comprising

- *Generating the page containing the changed data:* A web server stores a page containing the changed data, such as a change in bid (Lefeber et al, paragraph 0066).

However, Lefeber et al does not expressly teach *defining the page using hypertext markup language (HTML)*.

Logan et al teaches *defining a page using hypertext markup language* (Logan et al, column 4, lines 14-25: whereas, the client devices have web browsers that retrieve web pages written in HTML).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Lefeber et al's web server to further generate web pages written/defined in HTML as taught by Logan et al. The combination of Lefeber et al, Smith et al, and Logan et al, would have allowed Lefeber et al's system to have updated a set of display data on clients using a well-known markup language (HTML).

With regards to claim 20, which depends on claim 1, Lefeber et al does not teach *retrieving the page containing the changed data from a cache in response to receiving the request, wherein generating the page containing the changed data is performed in response to a previously received request for the page containing the changed data.*

However, Logan et al teaches *retrieving the page containing the changed data from a cache in response to receiving the request, wherein generating the page containing the changed data is performed in response to a previously received request for the page containing the changed data*: Pages containing changed data are stored locally on the computer (Logan et al, column 6, lines 25-32). These cached pages are rewritten/updated when a change has occurs (Logan et al, column 6, lines 55-67), for which the rewritten pages are then stored back in cache for future use).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified clients of Lefeber et al's system to utilize the caching ability as taught by Logan et al. The combination of Lefeber et al, Smith et al, and Logan et al would have allowed clients of Lefeber et al's system to have reduced overhead time for displaying changed data that has been retrieved previously.

7. Claims 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lefeber et al (US Application: 2002/0046299, published: Apr. 18, 2002, filed: Dec. 6, 2000), Smith et al (US Application: 2002/0016839 A1, published: Feb. 7, 2002, filed: May 31, 2001), Logan et al (US Patent Number: 5,781, 909, issued: Jul 4, 1998, filed: Feb 13, 1996) in further view of Ballard (US Application: US 2004/0039776 A1, published: Feb. 26,2004, filed: Aug. 26, 2002) and Hanson et al (US Patent: 6,985,950 B1, issued: Jan. 10, 2006, filed: Mar. 6, 2001).

With regards to claim 12, which depends on claim 2, Lefeber et al does not teach a method for each page comprises a plurality of panels and identifying the page that contains the changed data comprises: *Identifying a panel that contains the changed data, and identifying the page that contains the identified panel.*

However, Ballard teaches a method for *identifying a panel that contains the changed data* (Ballard, paragraph 0026: whereas, it is determined which data frames/panel displayed to the user need to be updated, due to new/changed data being available).

Furthermore, Lefeber et al, Smith et al, Logan et al, and Ballard are analogous art since they are from the same problem solving area: optimizing client/server communications.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Lefeber et al's notification system to further include the ability to selectively update a particular frame/panel as taught by Ballard. The combination of Lefeber et al, Smith et al, Logan et al, and Ballard would have allowed Lefeber et al's system to have "provided for refreshing of ... frames" (Ballard, paragraph 0013) and also reduced the amount of "queries that often provide no new message information to the querying client" (Ballard, paragraph 0014).

However, Lefeber et al and Ballard do not teach *identifying the page that contains the identified panel.*

Hanson et al teaches *identifying the page that contains the identified panel* (Hanson et al, column 5, lines 25-36: whereas, meta information about each web page, and the frames that are contained within each of them, are generated).

Furthermore, Lefeber et al, Smith et al, Logan et al, Ballard, and Hanson et al are analogous art since they are from the same problem solving area: client/server communication and the optimization of content retrieval/distribution.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Lefeber et al and Ballard's frame updating system to further include the web page and frame meta information as taught by Hanson et al. The combination of Lefeber et al, Smith et al, Logan et al, Ballard, and Hanson et al, would have allowed Lefeber et al's system to have implemented a "database system optimized for categorizing pages" (Hanson et al, column 1, 55-57).

With regards to claim 13, which is dependent on claim 12, Lefeber et al does not teach a method wherein, *the panel that contains the changed data and the page that contains the identified panel are identified using XML code.*

However, Ballard teaches a method for:

- Identifying a *panel that contains the changed data*, in claim 12, and is rejected under the same rationale.
- *Using XML code* to implement the embodiments of Ballard's system (Ballard, paragraph 0066).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Lefeber et al's system to further include the ability to identify a panel that contains changed data using XML code as taught by Ballard. The combination of Lefeber et al, Smith et al, Logan et al, Ballard, and Hanson et al would have allowed a universal and/or non-proprietary method for exchanging frame change identification data between server/client devices.

However, Lefeber et al and Ballard's system does not expressly teach *identifying the page that contains the identified panel.*

Hanson et al teaches *identifying the page that contains the identified panel*, in claim 12, and is rejected under the same rationale.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Lefeber et al and Ballard's method for identifying a panel that contains changed data using XML code, to further include identifying the page that contains the identified panel in XML as well. The combination would have allowed a

universal and/or non-proprietary method for identifying the parent web page that contained the panel mapped to the changed data.

8. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lefeber et al (US Application: 2002/0046299, published: Apr. 18, 2002, filed: Dec. 6, 2000), Smith et al (US Application: 2002/0016839 A1, published: Feb. 7, 2002, filed: May 31, 2001), Logan et al (US Patent Number: 5,781, 909, issued: Jul 4, 1998, filed: Feb 13, 1996) in further view of Stone et al (US 2002/0078134 A1, published: Jun. 20, 2002, filed: Dec. 18, 2000).

With regards to claim 14, which is dependent on claim 2, Lefeber et al does not teach a method for *the rotation set is defined in an extensible markup language (XML) document.*

Logan et al teaches *a rotation set*, in claim 2, and is rejected under the same rationale. However, Lefeber et al and Logan et al does not teach the rotation set is defined in *extensible markup language (XML).*

Stone et al. teaches exchange of content using XML (Stone et al, paragraph 0039).

Furthermore, Lefeber et al, Smith et al, Logan et al, and Stone et al are analogous art since they are from the same problem solving area: push technology and web content processing.

It would have been obvious to have modified Lefeber et al and Logan et al's rotation set to be defined such that the content of the rotation set is stored using XML as taught by Stone et al. The combination of Lefeber et al, Smith et al, Logan et al, and Stone et

al would have allowed Lefeber et al's system to have provided a "structured syntax for data exchange" (Stone et al, paragraph 0037).

With regards to claim 15, which is dependent on claim 2, Lefeber et al does not teach a method wherein: *the at least one rotation set is sent to the set of clients, in response to identifying the change in the displayed data, and the at least one client that displays the at least one identified rotation set are identified using XML code.*

Logan et al teaches the *at least one client that displays the at least one identified rotation set*, in claim 2, and is rejected under the same rationale. However, Lefeber et al, and Logan et al do not teach *the at least one rotation set is sent to the set of clients, in response to identifying the change in the displayed data.*

Lefeber et al, Smith et al, and Logan et al teach *the at least one rotation set is sent to the set of clients, in response to identifying the change in the displayed data*, in claim 6, and is rejected under the same rationale. However, Lefeber et al, Smith et al, and Logan et al do not teach the rotation set *identified by XML code*.

Stone et al teaches *identifying* changed content information by using *XML code* (Stone et al, paragraph 0039).

Furthermore, Lefeber et al, Smith et al, Logan et al, and Stone et al are from the same problem solving area: push technology and web content processing.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Lefeber et al, Smith et al, and Logan et al's rotation set to identifying content changes using XML code as taught by Stone et al. The combination

would have allowed Lefeber et al's system to have provided a "structured syntax for data exchange" (Stone et al, paragraph 0037).

9. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lefeber et al (US Application: 2002/0046299, published: Apr. 18, 2002, filed: Dec. 6, 2000), Smith et al (US Application: 2002/0016839 A1, published: Feb. 7, 2002, filed: May 31, 2001) in further view of Ballard (US Application: US 2004/0039776 A1, published: Feb. 26,2004, filed: Aug. 26, 2002) and Hanson et al (US Patent: 6,985,950 B1, issued: Jan. 10, 2006, filed: Mar. 6, 2001).

With regards to claim 18, which is dependent on claim 1, Lefeber et al does not teach a method comprising: *identifying at least one panel that contains the changed data, and identifying the at least one page that contains the at least one identified panel.*

Lefeber et al and Ballard teaches *identifying at least one panel that contains the changed data*, in claim 12, and is rejected under the same rationale. However, Lefeber et al and Ballard do not teach *identifying the at least one page that contains the at least one identified panel.*

Hanson et al teaches *identifying the at least one page that contains the at least one identified panel*, in claim 12, and is rejected under the same rationale.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Lefeber et al, and Ballard's panel identification system to further include identifying a page that contains at least one of the identified panels as taught by Hanson et al. The combination of Lefeber et al, Smith et al, Ballard, and Hanson et al, would have allowed Lefeber et al's system to update a particular page

that contains a panel with changed data, as opposed to updating all the pages displayed.

10. Claim 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lefeber et al (US Application: 2002/0046299, published: Apr. 18, 2002, filed: Dec. 6, 2000), Smith et al (US Application: 2002/0016839 A1, published: Feb. 7, 2002, filed: May 31, 2001) in further view of Ballard (US Application: US 2004/0039776 A1, published: Feb. 26,2004, filed: Aug. 26, 2002).

With regards to claim 21, which is dependent on claim 1, Lefeber et al does not teach a method for: *identifying the at least one panel that contains the changed data, retrieving the changed data, and generating the at least one identified panel using the changed data, wherein generating the page containing the changed data is performed using the at least one identified panel.*

However, Ballard et al teaches:

- *Identifying the at least one panel that contains the changed data*, in claim 12, and is rejected under the same rationale.
- *Retrieving the changed data* (Ballard, paragraph 0025: whereas, changed data is retrieved from a message database).
- *Generating the at least one identified panel using the changed data, wherein generating the page containing the changed data is performed using the at least one identified panel*: (Ballard, paragraph 0028: whereas, an identified frame/panel for a corresponding page is generated)

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Lefeber et al's notification system to include the ability for identifying the frame/panel that contains changed data, and update the identified frame/panel with the retrieved changed data. The combination of Lefeber et al, Smith et al, and Ballard et al, would have allowed Lefeber et al's system to have "provided for the refreshing of ... frames" (Ballard, paragraph 0013), such that only the relevant frame gets updated.

With regards to claim 23, which depends on claim 21, Lefeber et al teaches *a name of the page containing the changed data specifies the changed data to be retrieved* (Lefeber et al, paragraph 0070: whereas, the name of the page containing changed data is inherently specified, since a server redirects the client to a the web page containing changed data using a URL, which ultimately leads to the retrieval of specific page of data (which has file name)).

11. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lefeber et al (US Application: 2002/0046299, published: Apr. 18, 2002, filed: Dec. 6, 2000), Smith et al (US Application: 2002/0016839 A1, published: Feb. 7, 2002, filed: May 31, 2001) in further view of Ballard (US Application: US 2004/0039776 A1, published: Feb. 26,2004, filed: Aug. 26, 2002) and Logan et al (US Patent Number: 5,781, 909, issued: Jul 4, 1998, filed: Feb 13, 1996).

With regards to claim 22, which is dependent on claim 21, Lefeber et al does not teach a method for: *Retrieving the at least one panel containing the changed data from a cache in response to receiving the request, wherein generating the at least one panel*

containing the changed data is performed in response to a previously received request for the at least one panel containing the changed data.

Logan et al teaches *retrieving* the page *containing the changed data from a cache in response to receiving the request, wherein generating* the page *containing the changed data is performed in response to a previously received request for* the page *containing the changed data*, in claim 20, and is rejected under the same rationale.

However, Lefeber et al, and Logan et al do not teach *a panel containing changed data.*

Ballard et al teaches *a panel containing changed data* (Ballard, paragraph 0028: whereas, frames/panels are updated accordingly when there new/changed data available).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Lefeber et al and Logan et al's cache system to have further included a way to retrieve one or more panels from cache as taught by Ballard et al. The combination of Lefeber et al, Logan et al, and Ballard et al would have allowed Lefeber et al's system to have reduced overhead time for displaying changed panel data that has been retrieved previously.

12. Claims 28 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Logan et al (US Patent Number: 5,781, 909, issued: Jul 4, 1998, filed: Feb 13, 1996) in further view of Stone et al (US 2002/0078134 A1, published: Jun. 20, 2002, filed: Dec. 18, 2000).

With regards to claim 28, which is dependent on claim 26, Logan et al teaches a *rotation set*, in claim 26, and is rejected under the same rationale. However, Logan does not teach the rotation set *comprises extensible markup language*.

Stone et al teaches identifying changed web content by using *XML code* (Stone et al, paragraph 0039).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Logan et al's rotation set to hold web content data comprised of XML code as taught by Stone et al. The combination would have allowed Logan et al's system to have provided for a "structured syntax for data exchange" (Stone et al, paragraph 0037).

With regards to claim 46, which is dependent on claim 42, Logan et al teaches *a list of pages* in claim 42, and is rejected under the same rationale. However, Logan et al does not teach the rotation set comprises *extensible markup language*.

Stone et al teaches identifying changed web content by using *XML code* (Stone et al, paragraph 0039).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Logan et al's list of web pages to hold web content data comprised of XML code as taught by Stone et al. The combination would have allowed Logan et al's system to have provided a "structured syntax for data exchange" (Stone et al, paragraph 0037).

13. Claim 33, 34, 35, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lefeber et al (US Application: 2002/0046299, published: Apr. 18, 2002, filed: Dec.

6, 2000) in further view of Su et al (US Application: 2003/0084124 A1, published: May 1, 2003, filed: Oct. 31, 2001) and Logan et al (US Application: US 2004/0039776 A1, issued: Feb. 26,2004, filed: Aug. 26, 2002).

With regards to claim 33, which depends on claim 31, Lefeber et al does not teach a system *wherein the server comprises a configuration management module adapted to identify rotation sets that include at least one page affected by the change in the stored data, with each rotation set comprising a list of pages to be displayed by a client to which the rotation set is assigned.*

Logan et al teaches *rotation sets that include at least one page affected by the change in the stored data, with each rotation set comprising a list of pages to be displayed by a client to which the rotation set is assigned*: Each client receives and stores a control file, which comprises a transition list. The file is cyclically scanned for display/page entries and thus, represents a rotation set (Logan et al, column 2, lines 16-18). Each rotation set is updated due to at least one page affected by a change in data (Logan et al, column 19, lines 52-58: whereas, a page that has been affected by a change in stored data is identified).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Lefeber et al's alert server, to further include the ability to send rotation sets containing one or more pages affected by changed data, as taught by Logan et al. The combination of Lefeber et al and Logan et al would have allowed Lefeber et al's notification system to send an updated pages for clients to display.

However, Logan et al does not teach *identifying rotation sets.*

Su et al teaches *identifying rotation sets* since "the server includes a plurality of pages of information stored thereon that may be transferred to the client station" (paragraph 0016). The set of pages is represented as a list of pages for client display as shown in Figure 6. Furthermore, each rotation set is identified, since the server maps each set of pages to each user based on profile information (paragraph 0031), such that if there is a *page that has been affected by stored data*, a new rotation set is sent to the user (Su et al, paragraph 0024).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Lefeber et al and Logan et al's alert server to further include the ability to identify the rotation set that contains one or more pages affected by a change in data, as taught by Su et al. The combination of Lefeber et al, Logan et al, and Su et al would have allowed Lefeber et al's system to have "automatically provided information to a user .... without user intervention" (Su et al, paragraph 0006).
With regards to claim 34, which is dependent on claim 33, Lefeber et al teaches a system comprising:

- An alert/signaling *server that notifies at least one client of a change in data*, in claim 31, and is rejected under the same rationale.

However, Lefeber et al does not teach a system wherein the server is adapted to notify the at least one client by *sending, to the at least one client, a rotation set that includes at least one page affected by the change in the stored data.*

Logan et al teaches a system comprises:

- *A rotation set that includes at least one page affected by the change in the stored data*, in claim 33, and is rejected under the same rationale.
- *Sending the at least one rotation set to at least one client*: Each client receives and stores a control file, which is cyclically scanned for display/page entries and thus, represents a rotation set (Logan et al, column 2, lines 16-18).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Lefeber et al's alert server to further include the ability to notify clients that of a rotation set that contains at least one page affected by a change in stored data as taught by Logan et al. The combination of Lefeber et al, Logan et al, and Su et al would have allowed the client's of Lefeber et al's system to have displayed an updated set of pages.

With regards to claim 35, which is dependent on claim 33, Lefeber et al teach does not teach a system *comprising a local cache associated with the at least one client, wherein each local cache stores pages identified in the rotation set for the associated client and the associated client displays each page identified in rotation set assigned to the client until the client receives a rotation set that does not identify the page.*

However Logan et al teaches a system wherein:

- *A local cache associated with the at least one client* (Logan et al, column 19, lines 13-19: whereas, files mapped to URLs can be stored at each the client).
- *Each local cache stores pages identified in the rotation set for the associated client*: (Logan et al, column 6, lines 6-36: whereas, using a rotation set, an

access mechanism is used to translate URLs into local disk addresses (cache) at the client)

- *The associated client displays each page identified in rotation set assigned to the client until the client receives a rotation set that does not identify the page*: The pages are displayed in repeating sequence by cycling through the transition list (Logan et al, column 9, lines 48-56), until the list/set is received/updated through a server push mechanism (Logan et al, column 10, lines 1-3).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Lefeber et al's notification system to further include the caching of rotation sets as taught by Logan et al. The combination of Lefeber et al, Logan et al, and Su et al, would have allowed Lefeber et al's system to have retrieved rotation set data more efficiently by reducing remote communications overhead.

With regards to claim 36, which depends on claim 33, Lefeber does not teach a system *wherein the configuration management module is further adapted to store data regarding the content and layout of the at least one page*.

Su et al teaches a *configuration management module is further adapted to store data regarding the content and layout of the at least one page*, as the control module in the server maintains content information (including a plurality of pages as shown in Figure 5, reference numbers 41-43). Furthermore, any pages that have content, also inherently has one or more layout properties for each of them as well.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Lefeber et al's notification system to further include a

configuration module that stores content and layout data as taught by Su et al. The combination of Lefeber et al, Logan et al, and Su et al, would have allowed Lefeber et al's system to have been able to send customized page data (with respect to layout and content) to clients that have particular settings, resources, or displays.

14. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lefeber et al (US Application: 2002/0046299, published: Apr. 18, 2002, filed: Dec. 6, 2000) in further view of Scheinkman (US Application: US 2003/0005129 A1, published: Jan 2, 2003, filed: May 13, 2002).

With regards to claim 37, which depends on claim 31, Lefeber et al does teaches a system that *sends a notification of change in stored data to a client*, in claim 31 and is rejected under the same rationale. However Lefeber et al does not teach *maintaining an open connection with each client*.

Scheinkman teaches *maintaining an open connection with a client* (Scheinkman, paragraph 0020: whereas, an open connection is implemented between an alert server and a client/browser).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Lefeber et al's notification system such that notification messages can be sent though the open connection that is taught by Scheinkman. The combination of Lefeber et al and Scheinkman would have allowed Lefeber et al's system to have sent "information between computers on a real time basis" (Scheinkman, paragraph 0007).

15. Claim 38, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lefeber et al (US Application: 2002/0046299, published: Apr. 18, 2002, filed: Dec. 6, 2000) in further view of SearchSecurity (SearchSecurity.com, pages 1-3, published Oct, 5, 2000).

With regards to claim 38, which depends on claim 31, Lefeber et al does not teach a system wherein *the server further comprises cache for storing previously requested pages and the server is adapted to retrieve, from the cache, requested pages stored in the cache to send to the client that displays the page.*

However, SearchSecurity teaches *the server further comprises cache for storing previously requested pages and the server is adapted to retrieve, from the cache, requested pages stored in the cache to send to the client that displays the page* (SearchSecurity, page 1, Pa3: whereas, a proxy server comprises cache for storing previously requested pages without having to forward the request to the internet, and instead, returns the cached page to the user/client).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Lefeber et al's notification system to further include a proxy server that is capable of caching previously requested pages. The combination of Lefeber et al and SearchSecurity would have allowed Lefeber et al's system to have "improved user response time" (SearchSecurity, Pa5).

With regards to claim 41, which depends on claim 31, Lefeber et al does not teach a system wherein *a site cache stores pages displayed by a plurality of different clients,*

where the site cache is adapted to respond to a request for a page stored in the site cache by sending the requested page to a client that requested the page.
However, SearchSecurity teaches *a site cache stores pages displayed by a plurality of different clients, where the site cache is adapted to respond to a request for a page stored in the site cache by sending the requested page to a client that requested the page* (SearchSecurity, page 1, Pa2: whereas, a proxy server acts as a intermediary server for a particular enterprise/site. The proxy server includes a cache, such that a page stored in the cache is forwarded to the requesting client).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Lefeber et al's notification system to further include a server to act as a site cache as taught by SearchSecurity. The combination of Lefeber et al and Search Security would have allowed Lefeber et al's system to have "improved user response time" (SearchSecurity, Pa5).

16. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lefeber et al (US Application: 2002/0046299, published: Apr. 18, 2002, filed: Dec. 6, 2000) in further view of Ballard (US Application: US 2004/0039776 A1, published: Feb. 26,2004, filed: Aug. 26, 2002).

With regards to claim 40, which is dependent on claim 39, Lefeber et al teaches a system comprising a *page maker module* for generating pages using changed data in the database and using *formatting data*, in claim 31, and is rejected under the same rationale. However Lefeber et al does not teach *at least one panel generator for*

generating panels, with each page constructed from a plurality of panels as defined by the formatting data.

Ballard teaches *at least one panel generator for generating panels, with each page constructed from a plurality of panels as defined by the formatting data* (Ballard, paragraph 0027: whereas, a server builds a refresh frame/panel and sends it to the client's browser for display. Fig. 3 shows a plurality of panels, each with their own inherent formatting).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Lefeber et al's page maker module for generating pages, to further include a system for generating one or more panels as taught by Ballard. The combination would have allowed Lefeber et al's system to have updated clients such that changes of data with respect to a web page is propagated to displayed panels as well.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Hassett et al (US Patent: 6,807,558 B1, issued: Oct. 19, 2004, filed: Jun. 2, 1998): This art teaches the utilization of push technology, and customized web content for each client.
- Judson (US Patent: 6,457,025 B2, issued: Sep 24, 2002, filed: Feb. 5, 2001): This art teaches a rotation set of web pages.

- Mannings et al (US 6,334,152 B1, issued: Dec. 25, 2001, filed: Feb. 5, 1998):

  This art teaches a rotation set / "rolling web pages" on a display unit.

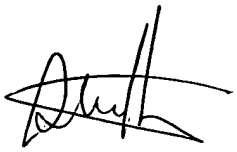
- Tsutsumitake (US 6,480,883 B1, issued: Nov. 12, 2002, filed: Jun. 29, 1999):

  This art teaches the pushing of web pages upon data change.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wilson Tsui whose telephone number is (571)272-7596. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hong can be reached on (571) 272-4124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



STEPHEN HONG
SUPERVISORY PATENT EXAMINER

Wilson Tsui
Examiner
Art Unit: 2178
March 6, 2006